

FEDOTOVA, T. I.

"Determination of Plant Resistance by Serological Methods," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1935 Goda, part 3, 1938, pp. 500-501. 423.92 1541

SO: SIRA SI 90-15 15 Dec1 1953

117 AND 118 INDEX		PROCESSING AND PROPERTIES INDEX		119 AND 120 INDEX	
<p>ФЕДОТОВА (Мме Т. И.). Серологический метод определения сортоустойчивости растений к заболеваниям. [The serological method of determining the varietal resistance of plants to disease.] — <i>Pl. Prot., Leningr.</i>, 1938, 16, pp. 50-58, 1938.</p> <p>In further studies on the estimation of the resistance of cotton to <i>Verticillium dahliae</i> by the serological method [<i>R.A.M.</i>, xv, p. 877; xvii, p. 438], the data obtained from tests on 150 samples from 125 strains of <i>Gossypium hirsutum</i>, <i>G. herbaceum</i>, and <i>G. barbadense</i> agreed in 80 per cent. of cases with the data from field trials. None of the deviations was great, but sometimes strains known from the field trial to be very susceptible or only slightly susceptible were placed in the moderately susceptible group. Isolations of <i>V. dahliae</i> from cotton and other plants, but grown on the same culture medium for a year, showed differences, sometimes marked, in the serological reactions induced by the susceptible and resistant strains of cotton.</p> <p>The resistance of 17 strains of <i>Phaseolus vulgaris</i>, <i>P. acutifolius</i>, and <i>P. aureus</i> to <i>Bacterium phaseoli</i> [<i>ibid.</i>, xvii, p. 720] was tested by the same method and the results obtained again agreed closely with the data from field trials. It was extremely difficult to obtain reliable</p>					
AER-51A METALLURGICAL LITERATURE CLASSIFICATION					
121 AND 122 INDEX		123 AND 124 INDEX		125 AND 126 INDEX	

field data for this disease and for *Bact. meningitis* var. *phaseolicola* [loc. cit.] and *Bact. phaseoli* var. *fusens* [ibid., xvi, p. 85], as they usually occur together, but serological tests indicate that bean varieties have different degrees of resistance to each of the three diseases.

The reliability of the serological method was further confirmed in testing the resistance of 16 strains of flax (*Linum usitatissimum* var. *elongatum*, *intermedium*, and *multicauleum*) to *Monosporium lini* [ibid., xvii, pp. 441, 530], *Fusarium lini* [loc. cit.], *Colletotrichum lini* [ibid., xvi, p. 386], and *Polysporus lini* [see above, p. 111].

7411  
 ФЕДИНОВА (Мне Т. И.). Применение упрощенных серологических  
 реакций в определении устойчивости сортов к заболеваниям.  
 (Application of simplified serological reactions for the determina-  
 tion of varietal resistance to disease.)--Dokl. Pt. Prot., Leningr.,  
 1939, 1, pp. 85-91, 1 fig., 1939.

In further investigations on the determination of varietal resistance of plants to disease by serological methods (*R.A.M.*, xviii, p. 127), the 'ring' reaction was studied in 14 varieties of beans in relation to their resistance to *Bacterium mactinarius*. The technique consists in pouring a thin layer of immunised serum (at a dilution of 1 in 20 or 1 in 40) with the help of a pipette over a layer (2 to 3 drops) of the antigen at the bottom of the test-tube, the most precise results being obtained with antigens stored for 24 hours at 5° to 8° C. after preparation and sera of high titre. The precipitin ring formed where the two liquids touch is either prominent and persistent (type +<sub>1</sub>), or at first rather ill-defined and later on assuming either more marked outlines or disappearing altogether (type +<sub>2</sub>); sooner or later both types diffuse and are then designated type +<sub>3</sub>. Very susceptible varieties gave the type +<sub>1</sub> reaction after 10 to 30 minutes, turning into type +<sub>2</sub> only after 24 hours or later; slightly susceptible varieties gave the type +<sub>1</sub> reaction after 40 minutes to 5 hours, turning into type +<sub>2</sub> after 3 to 24 hours; the medium susceptible varieties first formed type +<sub>1</sub> rings, which soon turned into +<sub>2</sub> and then gradually diffused; while resistant varieties gave no precipitin at all. The ring reaction was strictly specific and gave no precipitate with normal sera. The results obtained by this method agreed entirely with those obtained in agglutination tests, and it is recommended for large-scale practical work. Several experiments with the drop method, which consists in mixing one drop of serum with one drop of antigen on a glass slide, gave unreliable results.

R. of AM

Редотова (Мма Т. I.) & Карениович (Мма Z. H.). Ускоренный метод определения (бактериальной) зараженности семян с.-х. растений. [A quick method for determining the bacterial contamination of seeds of crop plants].—*Bull. Pl. Prot., Leningr.*, 1939, 1, pp. 92-93, 1939.

A simple and quick serological method for the determination of seed contamination with various bacterial diseases which proved successful in tests with cotton, wheat, and beans [*Phaseolus vulgaris*] is described as follows. Sera immunized against bacteria known to parasitize the crop under analysis are first prepared; these sera can be stored for

many years without losing their properties. Next, seeds and pieces of plant tissue are placed in test-tubes with a liquid nutritive medium and incubated for several hours to promote bacterial growth; and finally this bacteria-containing liquid, which represents the antigen, is added to the immunized serum. A floccular bacterial precipitate will result if the pathogen against which the serum has been immunized is present. This type of analysis can be entrusted to comparatively untrained persons provided they are supplied with sera prepared in central laboratories, and is, therefore, recommended for wide practical use.

FEDOTOVA, T. I.

"Brief Results of the Work upon the Phytopathological Basis of Selection and Estimation of Varieties for Resistance to Diseases in the Interpretation of Group Immunity,"  
Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1939 Goda, 1940, pp. 52-58. 423.92 1541

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117 AND 118 (REV. 7-1)

PROCESSING AND PROPERTIES INDEX

2A

11D

Immunological properties of proteins of wheat of different species and varieties in connection with their infection with the rust *Puccinia triticina*. T. I. Fedotova. *Bull. Plant Protection* (U. S. S. R.) 1940, No. 4, 123-31. — Serological analyses of proteins in different varieties of wheat infected with *P. triticina* support the previous conclusions that the immunol. properties of the wheat seed proteins det. the resistance of the variety not only to the species of the parasite, but also to its single races. The immunol. properties of the plasma proteins in the vegetative parts reflect the immunol. properties of the seed proteins. These properties are closely related to the receptivity or resistance of the plant to infection. Changes in the immunol. properties of the plasma proteins are general in character in regard to all races of rust in the strongly receptive and resistant varieties. In varieties possessing age resistance these changes are somewhat differentiated. Twenty-one references. W. R. Henn

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED INDEXED SERIALIZED FILED

1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 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FEDOTOVA, T.I., kand.sel'skokhousyaystvennykh nauk

Abnormal germination of seeds of grain crops. Trudy VIZR. no.1:60-61  
'48. (MIRA 11:7)  
(Grain--Diseases and pests)



FEDOTOVA, T.I., kand.sel'skokhozyaystvennykh nauk

Role of separate proteins in the seed in the manifestation  
of plant resistance to disease. Trudy VIZR no.1:62-71 '48.

(MIRA 11:7)

(Plants--Disease and pest resistance) (Proteins)

FEDOTOVA, T.I., kand.sel'skokhozyaystvennykh nauk

Laboratory (serological) seed tests in rating varieties for  
disease resistance. Trudy VIZR no.1:72-78 '48. (MIRA 11:7)  
(Plants--Disease and pest resistance)

FEDOTOVA, T.I., kand.sel'skokhozyaystvennykh nauk

Leaf roll in cotton. Trudy VIZR no.1:79-82 '48.  
(Cotton—Diseases and pests)

(MIRA 11:7)

FEDOTOVA, T. I.

"Importance of Individual Seed Analysis of Wheat Varieties for Resistance to Diseases,"  
Selektsiia i Semenovodstvo, vol. 16, no. 2, 1949, pp. 42-47. 61.9 se5

SO: SIRA SI 90-15, 15 Dec. 1953

FEDOTOVA, T.I.

FEDOTOVA, T.I., doktor sel'skokhozyaystvennykh nauk; KARASEVA, Ye.P.,  
kandidat sel'skokhozyaystvennykh nauk; RAKOVICH, M.I.

Differences in the activity of the potato wart pathogen. Dokl.  
Akad.sel'khoz. 22 no.9:31-33 '57. (MLRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy.  
Predstavlena sektsiyey zashchity rasteniy Vsesoyuznoy ordena Lenina  
akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina.  
(Potato wart)

FEDOTOVA, T. I.

COUNTRY : USSR  
 CATEGORY : Cultivated Plants. Cereals. M  
 Abs. Jour. : RZhBiol., No.14 1958, No. 63298  
 AUTHOR : Fedotova, T. I.  
 INST. : Kharkov University  
 TITLE : On the Methods of Creating Disease Resistant wheat Varieties.  
 ORIG. PUB. : V sb.: Vopr. metodiki selektsii pashenits i kukuruzy. Khar'kov, Un-t, 1957, 91-98  
 ABSTRACT : No abstract.

Card: 1/1

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FEDOTOVA, T. I.

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CIA-RDP86-00513R0004128

USSR/Plant Diseases - Disease of Cultivated Plants.

0-3

Abs Jour : Ref Zhur - Biol., No 15, 1958, 68529  
 Doktor Sel'skokhozyaystvennykh nauk  
 Author : Fedotova, T.I./, Karaseva, Yr.F., Rakovich, M.I.  
 Inst : All-Union Academy of Agricultural Sciences imeni V.I. Lenin  
 Title : Variations in the Activity of the Potato Canker Agent.  
 Orig Pub : Dokl. VASKhNIL, 1957, No 9, 31-33.  
 Abstract : Tests of the susceptibility of different potato varieties to canker have demonstrated that the Synchytrium endobioticum populations of different geographical devirations behave in different fashions. This is displayed according to the degree to which the plants are infected. The Chernovitskaya and Minskaya populations are more active than the Leningradskaya and Vil'nyusskaya populations.  
 --- S.V. Gorlenko

Card 1/1

Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy

VAKIN, A.T., prof.; GOLOVIN, P.N., prof., doktor biolog.nauk; DOBROZRKOVA, T.L., dotsent; ZHURAVLEV, I.I., doktor sel'skokhoz.nauk; POLYAKOV, I.M.; SOKOLOV, D.V., dotsent; STEPANOV, K.M., doktor biolog.nauk; TUPENEVICH, S.M., prof.; FEDORINCHIK, N.S., kand.sel'skhokhoz.nauk; FEDOTOVA, T.I., doktor sel'skokhoz.nauk; KHOKHRYAKOV, M.K., doktor biolog.nauk; CHIGAREV, G.A., kand.sel'skokhoz.nauk; YATSENKO, I.P., prof. [deceased]; REUTSKAYA, O.Ye., red.; CHUNAYEVA, Z.V., tekhn.red.

[A phytopathologist's dictionary - reference book] Slovar'-spravochnik fitopatologa. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 414 p.  
(MIRA 13:1)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Polyakov).  
(Plant diseases--Dictionaries)  
(Russian language--Dictionaries)

FEDOTOVA, T.I., doktor sel'skokhoz.nauk

Determining the viability of the causative organisms of potato  
wart. Zashch. rast. ot vred. i bol. 5 no. 8:49 Ag '60.

(MIRA 13:12)

(Potato wart)



FEDOTOVA, T.I., doktor sel'skokhoz.nauk; KRIVCHENKO, V.I., kand.sel'skokhoz.nauk

Nature of the infestation of wheat with loose smut. Zashch. rast.  
ot vred. i bol. 6 no.9:44-45 S '61. (MIRA 16:5)

1. Laboratoriya immuniteta Vsesoyuznogo instituta zashchity  
rasteniy.

(Wheat—Diseases and pests) (Smuts)

FEDOTOVA, T.I., prof.

Recent developments in the studies on the potato late blight.  
Zashch.rast.ot vred.i bol. 7 no.4:56 Ap '62. (MIRA 15:12)

1. Vsesoyuznyy institut zashchity rasteniy.  
(Potato rot)

RESEARCH TITLES

Significance of intraspecific variability of the causative  
agents of plant diseases for practical breeding. Trudy VIER  
no.17:119-137 '69. (MIRA 18:9)

YAKUBYSINER, M.M.; CHESNOKOV P.G.; FEDOTOVA, T.I.

Georgii Evgen'evich Spangenberg-Spagorov; 1889 - .Zashch. rast.  
ot vred. i bol. 9 no.10:59 '64 (MIRA 18:1)

YARUBTSINER, M.M.; FEDOTOVA, T.I.; CHESENIN, I.I.

In memory of Georgii Evgen'evich Spontsinnikov; on the 50th anniversary of his birth. Bot. zhur. 50 no. 4: 502-509. 1965. (NIIA 10:5)

1. Vsesoyuznyy institut zashchity rasteniy i zhivotnykh rasteniyevodstva, Leningrad.

FEDOTOVA, T.I., doktor sel'khoz.nauk, prof., red.; MINKINA, L.N.,  
red.

[Potato wart and its control] Rak kartofelia i mery bor'-  
by s nim; sbornik statei. Leningrad, Kolos, 1964. 158 p.  
(MIRA 18:12)

FEDOTOVA, T.I.; SHERBAKOVA, N.M.

Use of the serological method in the work of eliminating  
diseases in seed potatoes. Trudy VIZR no.21:51-56 pt.2 '64.  
(MIRA 18:12)

FEDOTOVA, T.I.

Problem of plant immunity in the U.S.S.R. Trudy VIZR no.23:  
131-141 '64. (MIRA 19:2)



FEDOTOVA, T. K.

"On the Problem of Preserving Berries." Thesis for degree of Cand. Technical Sci.  
Sub 27 Jun 49, Moscow Inst of Soviet Cooperative Trade

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

Fedotova, T.K.  
FEDOTOVA, T.K.; TE, V.

Jujube, a rich source of vitamin C. Vop.pit. 14 no.6:43 H-D '55.  
(MLRA 9:1)

1. Is Samarkandskego instituta sovetaskoy trgovli imeni Kuybysheva.  
(JUJUBE(PLANT)) (ASCORBIC ACID)

FEDOTOVA, T.K., kand. tekhn. nauk

Catalase activity of honey. Nauch. trudy Samark. inst. sov. torg.  
8:187-188 '57. (MIRA 12:7)  
(Honey) (Catalase)

FEDOTOVA, T.K., dotsent

Potassium pyrosulfite in carrot storage. Zashch. rast. ot vred.  
1 bol. 7 no.12:36 D '62. (MIRA 16:7)

1. Novosibirskiy institut sovetskoy kooperativnoy trgovli.  
(Carrots—Storage) (Potassium pyrosulfite)

LE DUTON, T.M.

7 Solrnetoelectric properties of solid solutions: (Pb, Ba)-  
SnO<sub>2</sub>, Pb(Tl, Sn)O<sub>2</sub>, and Pb(Zr, Sn)O<sub>2</sub>. G. A. Smolenskii,  
A. I. Agamovskaya, A. M. Kalina, and T. M. Pechenova.  
Zhur. Tekh. Fiz. 25, 2134-42 (1955).—The dielectric permittivity  
and the dissipation factor were measured from 0 to  
300°. In addn. the temps. of phase transitions for the  
various compds. as a function of compn. were detd. The  
results show that the solid soln. (Ba, Pb)SnO<sub>2</sub> (I) crystallizes  
with a perovskite structure and possesses solrnetoelec.  
properties. These solns. differ from other solrnetoelec.  
compds. in that the central atom does not have the at.  
structure of a noble gas. The transition temp. of I de-  
creases as the BaSnO<sub>2</sub> content increases. The solid solns.  
Pb(Tl, Sn)O<sub>2</sub> and Pb(Zr, Sn)O<sub>2</sub> (II) shows high transition  
temps. if the percentage of PbSnO<sub>2</sub> is high. In II two  
phase transitions were discovered. Werner Jacobson

Smol (3) 12/1

86489

5.2610

1043, 1136, 1273

S/078/60/005/008/022/031/XX  
B023/B066

AUTHORS:

Zvorykin, A. Ya., Perel'man, F. M., Babiyevskaia, I. Z.,  
Fedotova, T. N.

TITLE:

Calcium and Iron Germanates

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 8,  
pp. 1717-1724

TEXT: The authors investigated systems of sodium germanate and calcium nitrate or iron nitrate in aqueous solutions with different ratios of the components. The formation of calcium metagermanate,  $\text{CaO} \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$ , and three iron germanates,  $\text{Fe}_2\text{O}_3 \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$ ,  $\text{Fe}_2\text{O}_3 \cdot 2\text{GeO}_2 \cdot n\text{H}_2\text{O}$ , and  $\text{Fe}_2\text{O}_3 \cdot 3\text{GeO}_2 \cdot n\text{H}_2\text{O}$ , was detected by Schreinemaker's method. Thermograms and X-ray diffraction patterns of the compounds mentioned above disclosed characteristic peculiarities and confirmed the chemical homogeneity of the resulting compounds. It was further found that the germanate  $\text{Fe}_2\text{O}_3 \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$  may be obtained with 15 and 2.5 molecules of hydration water, and that the

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Calcium and Iron Germanates

86489

S/078/60/005/008/022/031/XX  
B023/B066

germanate  $\text{Fe}_2\text{O}_3 \cdot 2\text{GeO}_2 \cdot n\text{H}_2\text{O}$  still contains two  $\text{H}_2\text{O}$  molecules after drying at  $120^\circ\text{C}$ . All iron germanates were subjected to X-ray phase analysis at the laboratory of V. G. Kuznetsov. Table 1 shows the composition of the liquid phases and of the "residues" in the system  $\text{Na}_2\text{GeO}_3\text{-Ca}(\text{NO}_3)_2\text{-H}_2\text{O}$ , and Table 2 dto. in the system  $\text{Na}_2\text{GeO}_3\text{-Fe}(\text{NO}_3)_3\text{-H}_2\text{O}$ . Fig. 1 illustrates the composition of the solid phases in the system  $\text{Na}_2\text{GeO}_3\text{-Ca}(\text{NO}_3)_2\text{-H}_2\text{O}$ , and Fig. 2 dto. in the system  $\text{Na}_2\text{GeO}_3\text{-Fe}(\text{NO}_3)_3\text{-H}_2\text{O}$ . V. F. Zhuravlev is mentioned. There are 7 figures, 2 tables, and 10 references: 4 Soviet, 4 German, and 2 US.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

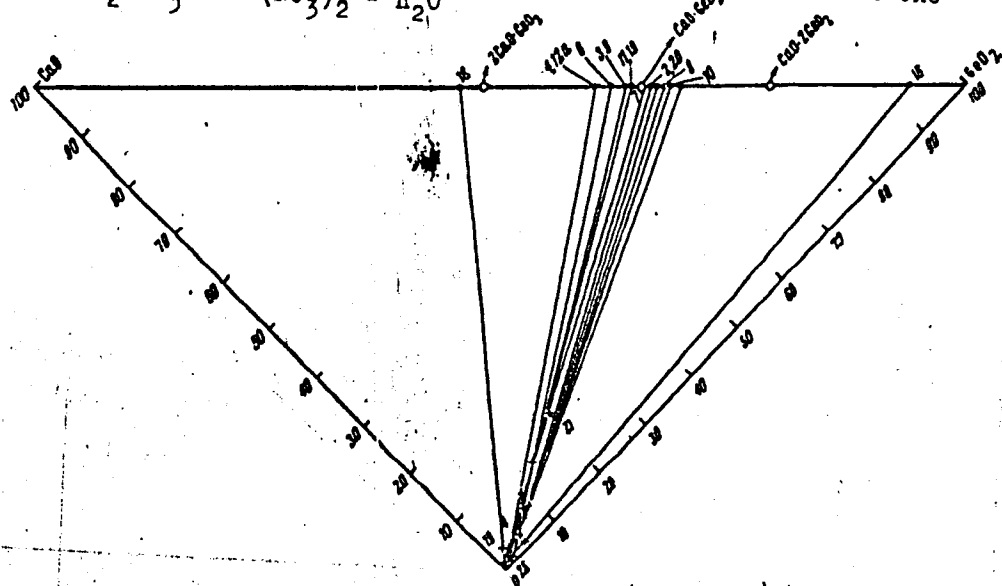
SUBMITTED: March 10, 1959

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86489

S/078/60/005/008/022/031/XX  
B023/B066

Legend to Fig. 1: Fig. 1: Composition of the solid phases in the  
system  $\text{Na}_2\text{GeO}_3 - \text{Ca}(\text{NO}_3)_2 - \text{H}_2\text{O}$



Card 3/3



CHERNYAYEV, I.I.; ADRIANOVA, O.N.; FEDOTOVA, T.N.

Spectropolarimetric study of the inner-sphere chlorination  
reaction of amines in platinum (IV) complexes. Zhur.neorg.  
khim. 11 no.1:43-53 Ju '66.

(MIRA 19:1)

1. Submitted December 14, 1964.

FEDOTOVA, T.T.; MES'KINA, P.A.

Improvements in the technological aspects of the manufacture of food concentrates. Kons.i ov.prom. 12 no.8:35 Ag '57. (MIRA 10:10)

1. Moskovskiy ordena Lenina pishchevoy kombinat imeni Mikoyana.  
(Food, Concentrated)

ALIYEV, A.D.; KRENTSEL', B.A.; FEDOTOVA, T.N.

Asymmetrical polymerization of trans-1-phenyl-1,3-butadiene.  
Vysokom. soed. 7 no.8:1442-1446 Ag '65. (MIRA 18:9)

1. Institut neftekhimicheskogo sinteza imeni A.V.Topchiyeva AN SSSR.

CHERNYAYEV, I.I.; FEDOTOVA, T.N.; ADRIANOVA, O.N.

Rotatory dispersion of mirror isomers  $\text{SnNH}_3\text{ClNH}_3\text{ClP}^{\text{O}}\text{Cl}_2$ .  
Zhur. neorg. khim. 10 no.7:1541-1549 51 '65.

(MIRA 18:8)

5(4)

AUTHORS:

Kaliko, M. A., Nikitin, Yu. S., Fedotova, T. V. SOV/76-33-4-26/32

TITLE:

The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts (Vliyaniye usloviy prigotovleniya gidrogeley okisi kremniya i okisi alyuminiya na strukturu i aktivnost' smeshannykh alyumosilikatnykh katalizatorov)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 922-929 (USSR)

ABSTRACT:

As is known, (Refs 8, 9) the porous structure of silicagels (SG) and aluminum gels (AG) strongly depends on the production technique. It can be expected that with equal content of (AG) the catalysts (C) prepared with hydrogels of different production differ from one another with respect to their properties. In the present case 4 (SG)-types were prepared, differing as to the concentration of the acids used in production and in the preparation conditions - SG-1 (4.36 n  $H_2SO_4$ ), SG-2 (2.37 n  $H_2SO_4$ ), SG-10 (1.1 n  $H_2SO_4$ ), S-25 (0.6 n HCl). The (AG) A-1 and A-2 were precipitated at a lower temperature ( $8-10^{\circ}$ ) than A-3 ( $100^{\circ}$ ).

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SOV/76-33-4-26/32

The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts

Aluminum silicagel catalysts (AC) were prepared by intermixing the humid (SG) and (AG) and by after-treating and annealing the tablets at 750° during 3 hours. The (SG) strongly differed in their structure (Fig 1 adsorption isotherm of  $\text{CH}_3\text{OH}$ , table 1, structural values). SG-1 is homogeneously fine-porous, SG-2 likewise, although it exhibits larger pores, S-25 and SG-10 are less homogeneous (they were precipitated at a higher pH). The structural properties of AG were likewise determined from methanol adsorption isotherms (Fig 2)(Table 1). A-3 possesses a considerably larger pore volume than A-1 and A-2. By intermixing the different (AG) and (SG) the authors obtained the (AC) having a constant composition (30%  $\text{Al}_2\text{O}_3$  - 70%  $\text{SiO}_2$ ) and the structural characteristics (Table 2) were determined from the adsorption isotherms of methanol (Fig 3). The catalytic activity of (AC) was evaluated after the cracking of the kerosene-gasoline fraction of an Artem-Malgobek petroleum at determined conditions (Table 3, results of cracking with the 6 various (AC)-types). The experimental results obtained show that in a certain respect the structural properties of the intermixed gels are preserved in the catalyst, in which con-

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SOV/76-33-4-26/32

The Effect of the Conditions of Preparation of Hydrogels of Silicon- and Aluminum Oxide Upon the Structure and Activity of Mixed Aluminosilicate Catalysts

nection the fine-porous (C) exhibit the greatest efficiency and the (C) prepared from coarse-porous gels exhibit the least activity. The structural formation of the gels depends on the preparation conditions and may be considered in the same way as the growing of crystals, which also explains various observations made. Thus an enlargement of the specific surface of the coarse porous (C) may be explained by a mutual stabilization of  $\text{SiO}_2$  and  $\text{Al}_2\text{O}_3$  particles in the process of drying and annealing, i.e. an enlargement of the particles is prevented. The catalytic activity may also be determined by the properties of the hydrogels. There are 3 figures, 3 tables, and 16 references, 11 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza (All-Union Scientific Research Institute for Petroleum Refining and Gas Processing)

SUBMITTED: October 3, 1957

Card 3/3

FEDOTOVA, V. A;KHORSOVA, N. I.

Clinical aspects of chronic poisoning with phenacetin. Klin.  
med., Moskva 30 no.4:88 Apr 1952. (CLML 22:2)

1. Of the Department of the Propedeutics of Internal Diseases  
(Head -- Prof. M. A. Brenner), Kazakh Medical Institute imeni V.  
M. Molotov, Alma-Ata.



FEDOTOVA, V.A.

Oxygen therapy for patients with chronic nonspecific pulmonary diseases. Zdrav.Kazakh. 16 no.9:25-27 '56. (MLRA 10:1)

1. Is kafedry propedevtiki vnutrennikh bolezney (sav. - professor M.A.Brenar) Kazakhskogo gosudarstvennogo meditsinskogo instituta imeni V.M.Molotova.

(LUNGS--DISEASES)

(OXYGEN--THERAPEUTIC USE)

FEODOTOVA, V.D.

Fluidity and strength of oleogels. A. A. Trapaznikov and V. A. Feodotova (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Fluidity Abstr.* Nauk S.S.S.R. 81, 1101-4 (1951). Curves of the shearing stress  $P$  as a function of the deformation time  $t$ , ded. with a 4% deceleration of Al naphthalene in decahydronaphthalene in the rate-of-shear ( $\omega$ ) range from  $3.2 \times 10^{-4}$  to  $35.5$  radians/sec. are of 2 types: at lowest  $\omega$ ,  $P$  increases monotonously with  $t$  to an equal  $P_0$  corresponding to stationary flow; at somewhat greater  $\omega$ ,  $P$  passes through a max., after which it falls to the equal  $P_0$ . Other investigation showed the apparently smooth curves corresponding to  $\omega$  from  $2 \times 10^{-4}$  to  $5 \times 10^{-4}$  also to possess a max., and only the curves for  $\omega$  from  $3.2 \times 10^{-4}$  to  $1.5 \times 10^{-3}$  to have none. There is, consequently, a crit.  $\omega$  below which a max. is rigorously absent and above which it appears. The magnitude  $P_0$  characterizes the purely viscous properties of the system, whereas the max. can be explained only in terms of elastic properties. The max., followed by a fall of  $P$ , indicates disruption of the structure; the value of  $P$  corresponding to the max. can therefore be considered as the strength of the system.  $P_0$  The max. appears when  $P_0$  is greater than the yield point  $P_y$ . In the range of small  $P < P_y$  and small  $\omega < \omega_c$ , the variation of  $P$  with  $\omega$  is linear, i.e. the viscosity  $\eta$  is const.; in the range  $P > P_y$  and  $\omega > \omega_c$  the system is non-Newtonian, i.e.  $\eta$  is variable. This point corresponds to appearance of  $P_y$ . The following conclusions flow from these facts:  $P_0$  is the max.  $P$  at which the flow can still be stationary, without there being any disruption of the structure either on a macro or on a micro scale; correspondingly,  $\omega_c$  is the max. rate of shear at which elastic stresses can still relax in a purely Maxwellian manner. In consistent gels, the relaxation period is so long, i.e. the rate of relaxation so small, that  $\omega$  is beyond the capill. sensitivity. In contrast to  $P_y$ , which is a true const.,  $P_0$  depends strongly on  $\omega$ ; it is, in effect, as is sometimes done, to identify  $P_0$  with  $P_y$  with increasing  $\omega$ , more and more bonds become unable to relax, and  $P_0$  can exceed  $P_y$  by a factor greater than 100. The range  $\omega > \omega_c$  is thus a range of incomplete relaxation. This range is subdivided into 2 subintervals: the curve has a distinct break at which very rapid growth of  $P$  sets in, i.e. relaxation becomes unusually difficult. The maxima on the  $P$ ,  $t$  curves are analogous to the maxima found in hydrophilic gels of bentonite clays and in solids. Consequently, the same system, depending on  $\omega$  in relation to the relaxation time of irreversible flow, can behave both as a brittle, i.e. perfectly solid, and as a viscous non-Newtonian liquid.

CA FEDOTOVA, V.A.

Dependence of the elastic deformation of an elongated on the rate of shear and its relation to viscometric properties. A. A. Trupnikova and V. A. Fedotova (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 82, 97-100 (1962); cf. C.A. 46, 4326. Curves of the shearing stress  $P$  as a function of the relative deformation  $\theta$ , detd. in a coaxial-cylinder app., are given for different rates of shear  $\omega$ ;  $\theta$  (in %) is defined by  $\theta = [2R_1/(R_1 - R_2)](\omega r - \phi)100$ , where the deformation  $S = \omega r - \phi$  is the difference of the angles of rotation,  $\omega r$  for the outer cylinder (radius  $R_1$ ) and  $\phi$  for the inner cylinder ( $R_2$ ), at the time  $r$ . The curves are of 2 types, with  $P$  either increasing monotonously to a stationary value  $P_s$ , or passing through a max.  $P_m$  at  $\theta$ , followed by a drop to  $P_s$ . With increasing  $P_s$ ,  $\theta$  first decreases somewhat and, after passing through a min. at  $P_m \approx 1100$  dynes/sq. cm., rises rapidly and levels off to  $\theta(\infty) \approx 6000\%$  at  $P_s \approx 3600$  dynes/sq. cm. The initial fall of  $\theta$  is due to a decrease of the effect of relaxation flow superposed on the elastic deformation; the increase of  $P_s$  beyond  $P_m$ , not accompanied by an increase of  $\theta$ , is attributed to viscosity of elastic afteraction. These results confirm the viewpoint that in every structured system there exists a max. elastic deformation attainable under quick stresses which prevent the development of relaxation flow, and which can exceed very considerably the elastic strain corresponding to the flow limit. The growth of  $\theta$  from  $P_s > P_m$  upwards shows that under quick stress the particles suffer strong elongation before they are broken up;

this elongation can be visualized as disentanglement of entangled chains; thermal motion of the thread-shaped particle tends to restore the clev shape, which is the natural shape without stress. The plot of the velocity gradient  $G = 2\omega/[1 - (R_2/R_1)^2]$  sec.<sup>-1</sup> as a function of  $P$ , has the form typical of Bingham bodies, with  $G$  increasing approx. linearly from a certain  $P_0 = P_s'$  on; this  $P_s'$  is the strength limit for disruption of the structure under stationary flow conditions. The magnified initial portion of the curve shows presence of flow even at smallest  $P$ , i.e. the system can also be viewed as a non-Newtonian liquid, in addn. to being a plastic body. The beginning growth of  $\theta$  at  $P_s \approx 1100$  dynes/sq. cm. corresponds to  $P_s \approx P_s' \approx 650$ , where the dependence of  $G$  on  $P_s$  becomes linear; this point thus coincides with beginning disentanglement of the balls. Below  $P_s'$ , the flow involves particles not yet disentangled. The plot of the viscosity  $\eta = P_s/G$  as a function of  $P_s$  shows  $\eta = \text{const.}$  at  $P_s < P_s'$  and  $\eta$  falling at  $P_s > P_s'$ ; the fall is linear over an extended range. Extrapolation to  $\eta_{\infty}$  gives  $P_s' \approx 575$ , close enough to  $650$  dynes/sq. cm., i.e.  $\eta$  decreases mainly in the range  $P_s < P_s'$ . Somewhat below and above  $P_s'$ , the fall of  $\eta$  becomes slower than linear, which can again be taken to indicate a change of the flowing particles from ball-shaped to partially disentangled. N. Thor

PERKOTOVA, V. A., and TRAFIZETIROV, A. A.

"On the Connection between Deformation Stabilities and Viscous Properties of Oleophillic Gel Solutions and on the Thixotrophy of Liquid-Plastic Colloid Systems" (O svyazi mezhdu deformatsionno-prochnostnymi i byazkostnymi svoystvami oleofil'nykh gel'rastvoren i o tiksotropii zhidko-plastichnykh kolloidnykh sistem) from the book Trudy of the Third All-Union Conference on Colloid Chemistry, pp. 65-91, Iz. AN SSSR, Moscow, 1953

(Report given at above Conference, Minsk, 21-4 Dec 53)

FEDOTOVA, V. A.

3

Thixotropy and methods of estimating it in liquid-plastic  
colloidal systems. A. A. Trapeznikov and V. A. Fedotova.  
*Doklady Akad. Nauk S.S.S.R.* 95, 595-8 (1954).—A 4% oil  
46, 8472.—A 4% oleogel of Al naphthenate in Decalin (I)  
was deformed in a concentric-cylinder viscometer at varying  
rates of shear  $\omega$  (radians/sec.). The curve of shearing stress  
 $P$  vs. time  $\tau$  passed through a max.  $P$ , and then fell to an  
equil.  $P$ . If  $\omega$  was decreased to zero and then increased  
again immediately,  $P$  then increased only to  $P_0$ ; this  
indicated that thixotropic structure in I had not re-formed.  
If I "rested" before  $\omega$  was increased again, the  $P$ - $\tau$  curve  
passed through a max., which reached  $P$ , if I rested for a  
time  $t_0$ , dependent on  $\omega$ . For  $\omega = 2.05$  and  $4.81$ ,  $t_0 =$   
600 and 900 sec., resp. The max. value of  $t_0$  for re-formation  
of the structure at the highest velocity gradient  $G$   
seems to characterize the thixotropy of the system. If  $\omega$   
was increased stepwise to 0.025, the  $P$ - $\tau$  curve showed a  
max. for each step; this indicated progressive breaking of  
bonds in I. Deformation at  $\omega = 0.00075$  did not alter the  
shape of the subsequent  $P$ - $\tau$  curve; this showed that the  
structure was not disturbed below the min.  $\omega$  (0.001435) for  
exhibition of anomalous viscosity and thixotropy. An in-  
crease of  $\omega$  above 0.14 caused a very small max. in the  $P$ - $\tau$   
curve, since the structure of I had already been destroyed.  
The amt. of thixotropy is related to the area between the  
 $P$ - $G$  and  $P$ - $G$  curves.

C. B. Feazel

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 80 (USSR) SOV/124-57-4-4434

AUTHORS: Trapeznikov, A. A., Fedotova, V. A.

TITLE: On the Connection Between the Strength-and-strain and the Viscosity Properties of Lyophilic Gel Solutions and on the Thixotropy of Liquid-plastic Colloidal Solutions (O svyazi mezhdu deformatsionno-prochnostnymi i vyazkostnymi svoystvami oleofil'nykh gel'-rastvorov i o tiksotropii zhidko-plastichnykh kolloidnykh sistem)

PERIODICAL: V sb.: Tr. 3-y Vses. konferentsii po kolloid. khimii. 1953 g. Moscow, AN SSSR, 1956, pp 65-91

ABSTRACT: Bibliographic entry

Card 1/1

124-1957-10-12303 D

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 151 (USSR)

AUTHOR: Fedotova, V. A.

TITLE: The Viscous and Deformation-strength Properties of Liquid Olefinic Systems (Vyazkostnyye i deformatsionno-prochnostnyye svoystva zhidkoobraznykh oleofil'nykh sistem)

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Candidate of Chemical Sciences, presented to the In-t fiz. khimii AN SSSR (Institute of Physical Chemistry, USSR Academy of Sciences), Moscow, 1956.

ASSOCIATION: In-t fiz. khimii AN SSSR (Institute of Physical Chemistry, USSR Academy of Sciences), Moscow.

Card 1/1

AUTHORS:

Fodotova, V. A., Trapeznikov, A. A. SOV/20-120-1-35/63

TITLE:

The Dependence of the Lower Structural Strength Limit and the Critical Velocity Gradient on the Concentration of the Aluminum Naphthenate Oleogel (Zavisimost' nizhnego predela prochnosti struktury i kriticheskogo gradiyenta skorosti ot kontsentratsii oleogolya naftenata alyuminiya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1950, Vol. 120, Nr 1, pp. 130 - 133 (USSR)

ABSTRACT:

The investigation of the dependence mentioned in the title lead to the finding of interesting rules. The evaluation of the curves determined by means of a complex elastoviscosimeter concerning the kinetics of the development of the deformation in the case of constantly applied shear stress  $\epsilon(\tau)_P$  ("method P = const") as well as of the curves for the kinetics of the development of the shear stress in the case of constant speeds of revolution of the outer cylinder  $P(\tau)_\Omega$  ("method  $\Omega$  = const") lead to the determination of the dependence of the viscosity of the system on the applied shear stress and of the velocity gradient. Thus the lower structural strength limit  $P_k$  and the corresponding value of the

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The Dependence of the Lower Structural Strength Limit  $30/20-120-1-35/63$   
and the Critical Velocity Gradient on the Concentration of the Aluminum  
Naphthenate Oleogel

velocity gradient  $\dot{\epsilon}_k$  for any concentration of the gel could be determined. Two diagrams show the dependences  $\eta(P)$  and  $\eta(\dot{\epsilon})$  for the aluminum naphthenate gel in dodecane at concentrations of from 6 to 20%. The systems with  $C < 6\%$  are still elastic and considerably liquid. However, the systems with  $C = 8 - 20\%$  react already like real highly elastic gels with great shear moduli. Yet also with these gels a slow but still measurable flow can be noticed. In all investigated concentrations of the oleogel the viscosity in the interval of the smallest  $P$  and  $\dot{\epsilon}$  is constant and begins to decrease at a little greater  $P$  and  $\dot{\epsilon}$ . In the case of increasing concentration of the gel the values of the maximum constant viscosity  $\eta_1 = \text{const}$  as well as of the lower strength limit  $P_k$  increase considerably. This increase of  $P_k$  with increasing  $C$  can be explained by the increase of the number of local bindings of the structural lattice of the gel. The values  $\dot{\epsilon}_k$  do not increase with increasing  $C$  but they decrease. The dependences  $\lg P_k - C$  and  $\lg \dot{\epsilon}_k - C$  fit well on straight lines.

Card 2/3

The Dependence of the Lower Structural Strength Limit SOV/20-120-1-35/63  
and the Critical Velocity Gradient on the Concentration of the Aluminum  
Naphthenate Oleogel

The relation  $P_K \epsilon_K = P_{K_1} \cdot \dot{\epsilon}_{K_1} = W_K = \text{const}$  is valid in this case. This might be connected with the fact that in the case of an increase of  $W_K$  various bindings in the gels break. There are 4 figures, 1 table, and 6 references, all of which are Soviet.

PRESENTED: December 28, 1957, by M.M. Dubinin, Member, Academy of Sciences, USSR

SUBMITTED: December 26, 1957

1. Aluminum compounds--Physical properties 2. Aluminum compounds  
--Viscosity 3. Aluminum compounds--Deformation 4. Mathematics  
--Applications

Card 3/3

AUTHORS: Fedotova, V. A., Trapeznikov, A. A. SOV/20-120-4-42/67

TITLE: The Influence of the Concentration of the Oleogel of Aluminium Naphthenate Upon the Maximum Limit Deformation and Upon the Corresponding Strength of the Structure (Vliyaniye kontsentratsii oleogelya naftenata alyuminiya na maksimal'nyuyu prejel'nyuyu deformatsiyu i sootvetstvuyushchuyu prochnost' struktury)

PERIODICAL: Doklady Akademii nauk SSSR, Vol. 120, Nr 4, pp. 841--844 (USSR)

ABSTRACT: The shear deformations corresponding to the ultimate stress limit are particularly marked in the oleogels of aluminium naphthenate; they amount to some thousand per cent and can therefore be regarded as being suitable superelastic highpolymeres. The authors investigated the dependence of the deformation  $\epsilon_r$ , which corresponds to the ultimate stress limit, on the shear tension  $P_r$  for 2 - 20 - per cent oleogels of aluminium naphthenate in Decalin. The maximum limit deformation  $\epsilon_{rm}$  decreases with increasing concentration of the oleogel; this indicates a decrease in elasticity. The authors also give a

Card 1/3

The Influence of the Concentration of the Oleogel of SOV/20-120-4-42/67  
Aluminium Naphthenate Upon the Maximum Limit Deformation and Upon the  
Corresponding Strength of the Structure

short explanation of the reasons of this decrease. The strength  $P_r = P_{r_2}$  at which the deformation corresponding with the ultimate stress limit,  $\epsilon_r$ , reaches its highest value  $\epsilon_{rm}$  (by the increase of the velocity of deformation) increases in proportion to the concentration of the system and is a linear function of the number of local bindings between the separate chains. The dependence of the value of  $\epsilon_{rm}$  on the concentration  $C$  corresponds to a hyperbola of the first degree. The deformation energy to be applied up to breaking quickly increases at low concentrations of the gel; in the case of higher concentrations  $C \sim 6 - 8\%$  it practically tends towards a constant value. This constancy indicates that the increase in bindings in the net of the lattice is compensated by a decrease of the deformation which corresponds with the ultimate stress limit. There are 4 figures, 1 table, and 13 references, 6 of which are Soviet.

Card 2/3

The Influence of the Concentration of the Oleogel of Aluminium Naphthenate Upon the Maximum Limit Deformation and Upon the Corresponding Strength of the Structure SOV/20-120-4-42/67

PRESENTED: February 7, 1958, by P. A. Rebinder, Member, Academy of Sciences, USSR

SUBMITTED: February 1, 1958

1. Aluminum naphthenate--Mechanical properties    2. Aluminum naphthenate--Structural analysis    3. Aluminum naphthenate--Elasticity  
4. Aluminum naphthenate--Deformation    5. Polymers--Materials

Card 3/3

18.1150

66517

SOV/137-59-7-15793

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 7, p 228 (USSR)

AUTHORS: Sheyn, A.S., Tsareva, A.A., ~~Fedotova, V.D.~~, Pavlova, Z.V.

TITLE: Steels for Rings and Rolling Parts of High-Temperature Bearings, Their Properties and Heat Treatment

PERIODICAL: Tekhnol. podshipnikostroyeniya, 1958, Nr 17, pp 68 - 88

ABSTRACT: Investigations were carried out into the effect of the geometrical shape and dimensions, the fiber direction, the temperature of quench-hardening, and annealing and chilling processes on changes in the structure and dimensions during heat treatment, stability of dimensions, hot hardness and contact endurance of "EI-347", "EI-161" and other heat resistant steels. Attempts were made to replace "EI-347" steel by a heat resistant bearing steel having considerable carbide heterogeneity. For this purpose steels were investigated containing (in %): C 0.60 - 0.81; Cr 2.99 - 8.01; W 1.3 - 7.4; V 0 - 1.26; Mo 0 - 0.49. Two new steel grades "V7Kh4F" and "V4Kh4MF" were developed, suitable to operate at temperatures

Card 1/2

4

66517

SOV/137-59-7-15793

Steels for Rings and Rolling Parts of High-Temperature Bearings, Their Properties and Heat Treatment

up to 400°C, and up to 500°C if  $R_c$  was 55. The chemical composition (in %) of V7Kh4F steel is: C 0.6 - 0.7; Mn  $\leq$  0.4; Si 0.4 - 0.6; Cr 4.4 - 5.0; V 0.4 - 0.7; Mo 0.2 - 0.35; V4Kh4MF steel contains: C 0.7 - 0.8; Mn  $\leq$  0.4; Si 0.4 - 0.6; Cr 4.4 - 5.0; V 0.7 - 1.0; Mo 0.4 - 0.6. 14 bibliographical titles.

T.F.

4

Card 2/2

S/137/62/000/012/041/085  
A006/A101

AUTHORS: Sheyn, A. S., Tsareva, A. A., Fedotova, V. D.

TITLE: Low-alloy heat-resistant steels for antifriction bearings and instruments

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 68, abstract 121403 ("Tr. Vses. n.-i. konstrukt. tekhnol. in-ta podshipnik. prom-sti", 1960, no. 2; (22) 102 - 120)

TEXT: The authors investigated the structure and the most important properties of new low-alloy heat resistant steels of type B4X4MΦ (V4Kh4MF) 0.65% C. They determined the effect of the quenching and tempering temperature, the number of tempering processes upon the hardness of type 3H944 (EI944) and 3H945 (EI945) steels. The authors studied furthermore the changes in size during heat treatment; stabilization of the structure and size, hot hardness and creep resistance; strength properties during tensile tests, torsion and impact bending; and the magnitude of contact endurance of (EI944) and (V7Kh4F) (EI945) steels, containing 0.75 and ... (?) [Abstracter's remark: omission]. The investigation

Card 1/2



Low-alloy heat-resistant steels for...

S/137/62/000/012/041/085  
A006/A101

methods are described. It is shown that low-alloy type EI944 steel has a lesser carbide heterogeneity, in particular in large sections, and better general mechanical properties, than high-speed steel, and a relatively high heat resistance. The steel is recommended for the manufacture of bearings intended to operate at temperatures up to  $400 - 450^{\circ}\text{C}$ , and for dies.

G. Rymashevskiy

[Abstracter's note: Complete translation]

Card 2/2

L 20121-65 EWG(j)/EWP(e)/EPA(s)-2/EM(m)/EPF(c)/EPF(n)-2/EWA(d)/EPR/EPA(w)-2/  
EPA(bb)-2/EWP(b)/EWP(t) Pq-1/Pr-1/Ps-1/Pt-10/Pu-1/Pab-10/Pad IJP(c) WH/WW/  
M/J/ID/H/DJ  
ACCESSION NR: AR4044544

S/0277/64/000/006/0025/0025

SOURCE: Ref. zh. Mashinostr. mat., konstr. i raschet detal. mashin. Otd. vy\*p.,  
Abs. 18.155

AUTHOR: Sheyn, A. S., Tsareva, A. A., Fedotova, V. D.

TITLE: A study of pyroceramics

CITED SOURCE: Tr. Vses. n.-i. konstrukt. tekhnol. in-ta podshipnik. prom-sti,  
1963, 57-64

PTC TAGS: ball thrust bearing, pyroceramic bearing, metallic alloy bearing, pyro-  
ceramic ball test, pyroceramic ball porosity, pyroceramic ball life

TRANSLATION: The study concerned pyroceramic materials for races and rollers of  
bearings working in aggressive environments and at high temperatures. Tests were made  
on disk-shaped samples (diameter-26 mm, height 3 mm) burnished for 1 hour on a 4-ball  
machine at temperatures of 20 to 900C (load 30 kg, molybdenum disulfide lubrication,  
argon atmosphere). Results of the study of various pyroceramics, differing in composi-  
tion, heat treatment and ratio of vitreous to crystalline phases, established that products  
of group Zh exhibit the best high-temperature strength at loads corresponding to apparent  
Card 1/2

L 20121-65

ACCESSION NR: AR4044544

contact stress  $\sigma_{\max}$  of 23,000 kg/cm<sup>2</sup>. Best workability in rolling is attained with the pair "metallic high strength pyroceramic or metalloceramic alloy". It is recommended that bearings be manufactured with races of metallic alloys and balls of pyroceramic. Tests on experimental lots of ball thrust bearings of type 8305, with races of heat resistant nickel alloy E1607 and pyroceramic balls, were carried out at 500 and 700C, under loads corresponding to apparent stresses  $\sigma_{\max}$  of 12,000 kg/cm<sup>2</sup>, 1000 rpm, in argon with graphite powder lubrication and in air without lubrication. Results demonstrated that the low contact life of the balls (from 50 min. to 5 hrs.) is due to substandard quality of the material (i.e. pores, cavities) and its high brittleness. A need is noted for developing the technology of manufacture of balls from non-porous and homogeneous pyroceramics.

SUB CODE: MT

ENCL: 00

Card

2/2

L 06327-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6013834

(A, N)

SOURCE CODE: UR/0276/65/000/011/B046/B047

AUTHORS: Tsareva, A. A.; Fedotova, V. D.

TITLE: Several peculiarities of the heat treatment technology of bearing parts made of EI347Sh steel

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 11B284

29  
27  
B

REF SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, 3(39), 1964, 10-14

TOPIC TAGS: steel alloy, ball bearing steel, metal heat treatment / EI347Sh steel alloy

ABSTRACT: The effects of quenching temperature and exposure time on the grain size, microstructure, and hardness of steel were investigated. It was shown that exposure time at the final temperature significantly increased the grain size and coarsened the microstructure. For example, the grain size and microstructure after an exposure time of 1 min/mm at a final temperature of 1200C is coarser than after 8 sec/mm at a final temperature of 1260C. For sufficiently short exposure times, significant differences in temperature do not affect the grain size and

Cord 1/2

UDC: 621.78:621.822

L 06327-67

AOC NR: AR6013834

2

microstructure. During the final heating prior to quenching of EI347Sh steel parts, an exposure time of 6—12 sec/mm (depending only on the thickness of the part) is recommended. Modifications of the heating regime prior to quenching should be performed by increasing or lowering the final heating temperature. Recommended heating regimes prior to quenching are presented for the temperature interval 1220—1240C. A microstructure scale for ball bearing parts is developed which is used in instructions for the manufacture of heat-resistant bearing parts made of steel EI347Sh (RTM 9-62). 4 illustrations, 2 tables. [Translation of abstract]

SUB CODE: 13, 11

bearing steel 18

Card 2/2 mLE

IVANOVA, N.A.; FEDOTOVA, V.I.

Cytomegaly in children. Sov.med. 26 no.2:78-82 F'63.

(MIRA 16:6)

1. Iz Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo  
instituta na baze detskoy ob'yedinennoy bol'nitsy (glavnyy  
vrach Z.A.Steklyarnikova) Kalininskogo rayona.  
(VIRUS DISEASES) (INFANTS (NEWBORN)—DISEASES)

L 3608-66 EWT(1)/EWP(m)/FNA(1)/ECS(2)

ACCESSION NR: AP5024045

UR/0057/65/035/009/1652/165749

AUTHOR: Redkoborodyy, Yu. N.; Fedulov, V. I.

533.9.07

TITLE: Bolometric measurements of the radiation of an ionized shock wave in argon

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 9, 1965, 1652-1657

TOPIC TAGS: plasma shock wave, argon, plasma radiation, bolometer, recombination radiation

ABSTRACT: The authors have measured the radiation from reflected shock waves with Mach numbers between 7 and 11 in argon at 10 mm Hg. The shock waves were produced in an electric discharge shock tube which was provided with a lithium fluoride glass window at the far end. A bolometer mounted outside this window recorded on an oscilloscope the radiation from the reflected shock wave. The bolometer was similar to the instrument described by L.L. Gorelik (ZhTF, 34, 496, 1964); it had a resolving time of 10 microsec and an equilibration time of 0.1 sec. The surface of the bolometer was blackened by depositing aluminum on it in a nitrogen atmosphere at 1 mm Hg; this increased the sensitivity by a factor 7. The radiation intensity of the shock wave plasma was calculated from the bolometer readings recorded during approximately the first 100 microsec after the reflection; preliminary calculations

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L 3608-66

ACCESSION NR: AP5024045

15

tions indicated that the layer of plasma involved would be optically thin, and this was confirmed by the measurements. The measured radiation intensities were compared with values calculated with the theory of F.H.Mies (J. Chem. Phys., 37, No.5, 1963). Only recombination radiation was taken into account in the calculations, preliminary estimates having indicated that the bremsstrahlung and line spectrum intensities would be negligible. When the logarithms of the measured intensities were plotted against the reciprocals of the corresponding temperatures, the points fell near a straight line that was parallel to but somewhat below the theoretical curve. This discrepancy is ascribed to incorrect temperature determination; the velocity of the shock wave was measured at some distance from the window and its decrease with increasing age of the wave was neglected. Comparison of the measured radiation intensities with enthalpies of argon indicate that in the theory of argon shock waves radiative energy losses can be neglected at temperatures up to 10 000 °K but must be taken into account at higher temperatures. "In conclusion, we thank L.L.Gorelik and V.V.Sinitin for valuable advice and discussions, V.I.Kogan and A.I.Karchevskiy for very significant remarks which enabled us to improve the quality of the work, and V.I.Nikolayev for assistance in fabricating the bolometers." Orig. art. has: 7 formulas and 2 tables.

Card 2/3



L 3608-66

ACCESSION NR: AP5024045

ASSOCIATION: none

SUBMITTED: 17Dec64

ENCL: 00

SUB CODE: ME, *NP*

NO REF SOV: 008

OTHER: 003

*mlr*  
Card 3/3

TUV, I.A., kand.tekhn.nauk; FEDOTOVA, V.N., inzh.

Simplified method of determining fuel oil efficiency. Trudy  
LIVT no.18:25-31 '61. (MIRA 14:9)  
(Petroleum as fuel--Testing)

SVOYATITSKAYA, S.T. [Svoiatyts'ka, S.T.]; SERGEYENKOVA, P.M. [Serhiienkova, P.M.]; GALUSHKINA, I.M. [Halushkina, I.M.]; FEDOTOVA, V.O.; NOSOV, M.P.; SUFIK, B.I.; PEREDERIY, A.T.; PRIKHOD'KOV, V.F.,  
otv. za vypusk; DEMERDZHI, D.L., red.; GLUSHKO, G.I. [Hlushko, H.I.],  
tekhn.red.

[Economy of Dnepropetrovsk Province; statistical collection] Na-  
rodne hospodarstvo Dnipropetrovs'koi oblasti; statystychnyi zbirnyk.  
Dnipropetrovs'k, Dnipropetrovs'ke knyazhkovye vyd-vo, 1960. 221 p.  
(MIRA 13:12)

1. Dnepropetrovsk (Province) Statisticheskoye upravleniye.
  2. Dnepropetrovskoye oblastnoye statisticheskoye upravleniye (for Svoiatitskaya, Sergeyenkova, Galushkina, Fedotova, Nosov, Sufik, Perederiy).
  3. Nachal'nik Dnepropetrovskogo oblastnogo statisticheskogo upravleniya (for Prihod'ko).
- (Dnepropetrovsk Province--Statistics)

LISITSIN, Ye.A.; FEDOTOVA, V.P.; NOGTEVA, N.Ya.

Experience in the production of no.1310 unbleached poplin. Tekst.  
prom. 17 no.9:56-57 S '57. (MIRA 10:11)

1. Zaveduyushchiy tkatskim proizvodstvom fabriki Bol'shaya  
Ivanovskaya Manufaktura (BIM) (for Lisitsyn). 2. Zaveduyushchiy  
laboratoriyey fabriki Bol'shaya Ivanovskaya Manufaktura (for  
Fedotova). 3. Nachal'nik prigotovitel'nogo otdela fabriki Bol'shaya  
Ivanovskaya Manufaktura (for Nogteva).  
(Cotton fabrics)

ACC NR: AP6014671

SOURCE CODE: UR/0241/65/010/010/0057/0061

AUTHOR: Moroz, B. B.; Bezin, G. I.; Grozdov, S. P.; Lebedev, B. I.;  
 Vas'il'yevskaya, V. G.; Vasil'yevskaya, V. V.; Ponomar'kov, V. I.; Ponomarkov, V. I.;  
 Fedorovskiy, L. L.; Fedorovsky, L. L.; Fedotov, V. P.

ORG: none

TITLE: Experimental Po sup 210 - induced chronic radiation sickness

SOURCE: Meditsinskaya radiologiya, v. 10, no. 10, 1965, 57-61

TOPIC TAGS: polonium, radiation sickness, dog, alpha radiation, radiology

ABSTRACT: The article describes the features of the clinical course and variation of certain functions in dogs with chronic radiation sickness caused by a single subcutaneous injection of  $Po^{210}$  (0.003 microcuries per kg body weight). A prolonged initial period of relative clinical well-being was observed, with a developed picture of radiation sickness setting in only after some 3 months and with the dogs dying off individually after a period of from 128 to 310 days. The distribution of  $Po^{210}$  throughout the tissues and organs, which resulted in a constant local alpha-irradiation of the latter, evidently played a major role in the genesis of these disturbances, with gradual increment in the tissue dose, which after 6-9 months reached 1,100-1,400 rads. During the period of distinct radiation sickness the dogs displayed lethargy, lack of appetite, periodic diarrhea, and thirst, along with spontaneous bleeding of the oral mucosa and spontaneous hemorrhages of the rectum and

Card 1/2

UDC: 617-001.28-008.939.65

L 24235-66

ACC NR: AP6014671

urinary tract. Shortly before death, the state of the dogs sharply deteriorated; they moved with difficulty, refused food, and vomitted bile and blood. Rectal temperature rose; the pulse was quick, arrhythmic, and arterial pressure fell. With these symptoms, the dogs died. It was accompanied by deep trophic disturbances due to a combination of mechanisms, each of which by itself may cause trophic changes: disturbances in neuroendocrine regulations with insufficiency of the adrenal cortex; metabolic disorders, hemodynamic disorders, and chronic hypoxia, as well as the constant direct local effect of the alpha-emitter on the tissues. Anatomic-pathological dissection revealed that state of general dystrophy which is so characteristic of polonium poisoning and is not encountered when other radioactive isotopes pervade the organism. Orig. art. has: 4 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 25Aug61 / ORIG REF: 009

Card 2/2dda

SREDNEV, V.A.; FEDOTOVA, V.P.; NOGTEVA, P.Ya., master

Use of xylitol in sizing. Tekst.prom. 25 no.11:41-42 N '65.  
(MIRA 18:12)

1. Nachal'nik tkatskogo proizvodstva fabriki "Bol'shaya  
Ivanovskaya manufaktura" (for Srednev). 2. Nachal'nik  
tkatskoy laboratorii fabriki "Bol'shaya Ivanovskaya  
manufaktura (for Fedotova). 3. Prigotovitel'nyy otdel  
fabriki "Bol'shaya Ivanovskaya manufaktura" (for Nogteva).

POLOZOV, V.F.; FEDOTOVA, V.V.

Oxidation of high molecular weight compounds. Trudy VNIIPS  
no.6:235-244 '58.

(Macromolecular compounds) (Oxidation)

(MIRA 11:8)



5.3630

2209, 1153, 1266

S/079/60/030/008/012/012/XX  
B001/B066

AUTHORS: Soborovskiy, L. Z., Gololobov, Yu. G., and Fedotova, V. V.

TITLE: Reaction of Trivalent Phosphorus Compounds With Halogenated  
Acid Chlorides. I. Reaction of Trialkyl Phosphites With  
Trichloro-acetyl Chloride

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 8, pp.2586-2590

TEXT: When reacting triethyl phosphite with trichloro-acetyl chloride  
(Ref. 3), a product had been separated from the reaction mass, in addition

to  $(RO)_2 \overset{\overset{O}{\parallel}}{P} - O - \overset{\overset{O}{\parallel}}{C} - \overset{\overset{O}{\parallel}}{P}(OR)_2$  (I), which had been mistaken for the

ketoester. The authors investigated more thoroughly the conversions taking  
place during the reaction of triethyl phosphites with trichloro-acetyl  
chloride, since, owing to the presence of a trichloro-methyl radical on  
the carbonyl group, at least a partial formation of trichloro-vinyl esters

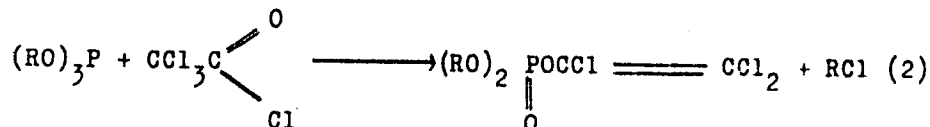
Card 1/3

85715

Reaction of Trivalent Phosphorus Compounds With Halogenated Acid Chlorides. I. Reaction of Trialkyl Phosphites With Trichloroacetyl Chloride

S/079/60/030/008/012/012/XX  
B001/B066

hitherto unknown was to be expected.



In the reaction of trialkyl phosphites with a considerable excess of trichloroacetyl chloride under mild conditions in addition to compound (I) (yield, 15-25%), compounds were obtained which were identified to be trichloro-vinyl-dialkyl phosphates. Molecular weight and analytical data indicated that there was only one phosphorus atom in the molecule. The investigation of the resulting products revealed that they add two chlorine atoms to give pentachloro derivatives; by acid hydrolysis they are completely converted to phosphoric, and not to phosphorous acid; the infrared spectrum shows an absorption band characteristic of the C=C double bond. In order to compare the properties of the resultant tri-

Card 2/3

07/17

Reaction of Trivalent Phosphorus Compounds  
With Halogenated Acid Chlorides.

S/079/60/030/008/012/012/XX  
B001/B066

I. Reaction of Trialkyl Phosphites With  
Trichloro-acetyl Chloride

chloro-vinyl-dialkyl phosphates with those of the isomeric esters of trichloro-acetyl phosphinic acid, the latter were synthesized by reacting trichloro-acetyl chloride with dialkyl phosphites. The constants of these compounds are little different from those of the corresponding trichloro-vinyl-dialkyl phosphates. Unlike the latter, the esters of trichloro-acetyl phosphinic acid give phosphoric acid on acid hydrolysis; the infrared spectrum shows a  $C=O$  group. The reaction of the esters of trichloro-acetyl phosphinic acid with trialkyl phosphites gives  $\beta,\beta$ -dichloro- $\alpha$ -dialkyl-phosphono-vinyl-dialkyl phosphates. Their structure was confirmed by spectrum analysis of a sample. Mention is made of M. I. Kobachnik and P. A. Rossiyskaya. There are 3 figures, 3 tables and 3 Soviet references.

SUBMITTED: July 15, 1959

Card 3/3

YURGANOV, N. N.; FEDULOVA, V. V.

Possibility of producing high-quality cement from alkaline  
raw material. Trudy Giprotsement no. 26:196-199 '63.

(MIRA 17:5)

L 18271-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM  
ACCESSION NR: AP5002964

S/0079/64/034/009/2697/2502

AUTHOR: Gladshcheyn, B. M.; Rebkins, E. I.; Fedotova, V. V.; Soborovskiy, L. Z.

TITLE: Investigation in the series of organic sulfur compounds. VIII. Behavior of alkane- and alkenesulfonyl fluorides, as well as their halo derivatives, towards esters of trivalent phosphorus

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2897-2902

TOPIC TAGS: organic sulfur compound, fluoride, ester, organic phosphorus compound

Abstract: The behavior of alkane- and alkenesulfonyl fluorides, as well as their halo derivatives, toward highly reactive esters of methylphosphinous acid was studied. The reactions of methane-, ethane-, vinyl-, beta-chloro-ethane-, and beta-chlorovinylsulfonyl fluorides with the diethyl ester of methylphosphinous acid were investigated. Methane- and ethanesulfonyl fluorides did not react with diethyl methylphosphinite under the conditions used. Vinyl-sulfonyl fluoride added diethyl methylphosphinite in the 1,4-position. Beta-chlorovinylsulfonyl fluoride reacted with diethyl methylphosphinite at the beta-carbon atom according to the Arbuzov rearrangement at equimolar ratios of the substances. Beta-chlorovinylsulfonyl fluoride reacted in steps with 2 moles of diethyl methylphosphinite, forming ethyl-

Card 1/2

L 18271-65  
ACCESSION NR: AP5002984

(beta-fluoroculfoviny) methylphosphinite, which reacted with the second mole of diethyl methylphosphinite similar to the reaction of diethyl methylphosphinite with vinylsulfonyl fluoride. Beta-chloroethanesulfonyl fluoride reacted with diethyl methylphosphite in two ways: by forming the Arbuzov rearrangement products, and at the alpha-carbon atom, eliminating vinylsulfonyl fluoride. Orig. art. has 15 formulas and 1 graph.

ASSOCIATION: none

SUBMITTED: 05Apr63

NO REP SOV: 012

ENCL: 00

OTHER: 013

SUB CODE: 00, 00

JPRS

Card 2/2

GLADSHTEYN, B.M.; BABKINA, E.I.; FEDOTOVA, V.V.; SOBOROVSKIY, L.Z.

Organic compounds of sulfur. Part 8: Behavior of alkane- and alkenylsulfonfluorides and of their halo derivatives in relation to trivalent phosphorus acid esters. Zhur. ob. khim. 34 no.9: 2897-2902 S '64. (MIRA 17:11)

SARATIKOV, A.S.; FEDOTOVA, V.Ye.

Saussurea extract as an antilamblasis drug. Apt.delo 12 no.3:  
26-28 My-Je '62. (MIRA 16:1)

1. Tomskiy meditsinskiy institut.  
(GIARDIASIS) (SAWWORT)



FEDOTOVA, Yekaterina Aleksandrovna; RYAZANOVA, V., redaktor; RAKOV, S.I.,  
tekhnicheskiiy redaktor.

[How we improve the quality of cloth] Kak my uluchshaem kachestvo  
tkani. [Moskva] Izd-vo VTsSPS Profizdat, 1954. 60 p. (MIRA 8:5)

1. Predsedatel' fabrika Moskovskoy fabрики "Osvobozhdenyy trud."  
(Textile industry)

FEDOTOVA, Ye.A.; SORKIN, E.Ye.

Pulmonary arteriovenous aneurysms in Rendu-Osler disease.  
Terap. arkh. 35 no.1:100-104 Ja'63. (MIRA 16:9)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof.  
Sh. I. Ratner) i kafedry patologicheskoy anatomii (zav.  
dotsent A.I.Zelenskiy) Khabarovskogo meditsinskogo instituta.  
(TELANGIECTASIS)

L 8489-65 EWT(m)/EPF(n)-2/EPR/EWP(q)/EWP(b) Pa-4/Pu-4 ASD(m)-3/AFWL/  
AS(mp)-2/ESD(gs)/ESD(t)/RAEM(t) JD/JG/AT/WH

ACCESSION NR: AP4044938

S/0181/64/006/009/2673/2682

AUTHOR: Iglitsy<sup>n</sup>, M. I.; Mirzabayev, M.; Tuckevich, V. M.;  
Fedotova, Ye. F.; Shmartsev, Yg. V.

TITLE: Galvanomagnetic phenomena in n-type silicon carbide at low temperatures

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2673-2682

TOPIC TAGS: silicon carbide, n type silicon carbide, galvanomagnetic property, electrical resistivity, Hall coefficient, magnetoresistance

ABSTRACT: Electrical resistivity, Hall coefficient, and, for the first time, magnetoresistance have been measured at 1.5—290 K for n-type hexagonal  $\alpha$ -SiC with a free carrier concentration of  $10^{18} \text{ cm}^{-3}$ . Green transparent SiC single crystals grown by the Lely method were used. It was shown that at low temperatures phenomena occur in SiC which are characteristic of impurity conductivity. The negative magnetoresistance showed an anomalous considerable angular dependence. Orig. art. has: 2 tables, 9 figures, and 3 formulas.

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L 8489-65

ACCESSION NR: AP4044938

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR); Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti, Moscow (State Scientific Research and Design Institute of the Rare-Metal Industry) 2

SUBMITTED: 31Mar64

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SUB CODE: IC, EM

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OTHER: 026

Card 2/2

SALDADZE, K.M.; PEREMYSLOVA, Ye.S.; FEDOTOVA, Ye.N.; GORYUNOVA, L.D.

Methods for purification of industrial ion exchangers. Plast.-  
massy no.3:51-54 '62. (MIRA 15:4)  
(Ion exchange)

FEDOTOVA, Ye.D.

Freezing depth of soil in Tatarstan as affected by meteorological conditions. Uch.zap.Kaz.un. 116 no.5:236-239 '56. (MIRA 10:4)

1. Kafedra meteorologii i klimatologii.  
(Tatar A.S.S.R.--Frozen ground)

FEDOTOVA, Ye.D.

Meteorological conditions in winter with deep and slight soil  
freezing in the middle Volga Valley. Uch. zap. Kaz. un. 117 no.9:  
337-340 '57. (MIRA 13:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.  
Kafedra meteorologii i klimatologii.  
(Volga Valley--Winter)

FEDOTOVA, Ye.D.

Synoptic conditions in winter with deep and slight soil freezing  
in the middle Volga Valley. Uch. zap. Kaz. un. 117 no.9:341-344  
'57. (MIRA 13:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.  
Kafedra klimatologii.

(Volga Valley--Winter)



FEDOTOVA, Ye.D.

Seasonal freezing of soils in Tatarstan and some regions of the middle Volga Valley. Trudy Kazan. fil. AN SSSR. Ser. energ. 1 vol. khox. no.4:133-140 '59. (MIRA 13:8)

1. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.  
(Tatar A.S.S.R.--Frozen ground)  
(Volga Valley--Frozen ground)

136-2-5/22  
AUTHOR: Okunev, A.I., Usachev, N.M., Lutokhin, D.I., Kurts, V.V.,  
Redotova, Y.I. and Vostriyakov, A.A.

TITLE: Results of Industrial Tests on the Smelting of Roasted  
Collective Copper-Zinc Concentrates. (Rezultaty promy-  
shlennykh ispytaniy plavki obozhzhennykh kollektivnykh  
medno-tsinkovykh kontsentratsov)

PERIODICAL: Tsvetnyye Metally, 1957, no.2, pp. 22 - 31 (USSR)

ABSTRACT: The use of flotation for concentrating many Ural copper-  
zinc ores has led to the production of copper concentrates  
containing as much as 10-12% with copper contents of 8-10%.  
The aim of the present work was to test the smelting of roasts  
of such concentrates in a full-scale reverberatory furnace to  
give a zinc slag. The experimental furnace used was at the  
Sredneural'skiy Works and had a hearth area of about 8 m<sup>2</sup>,  
chrome-magnesite walls and hearth and silica roof and was fired  
with coal dust. The following main results were obtained in  
2.5 - 3 months' work with concentrates containing 7-9% Cu  
and 6 - 15% Zn to give slags with 14-15% Zn. The results of  
laboratory investigations on zinc distribution between slag  
and matte in relation to their compositions were confirmed.  
When mattes contained 40 - 50% Cu, the zinc content in the  
slag was about 1.6 - 1.8 times greater than in the matte. The

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Results of Industrial Tests on the Smelting of Roasted Collective  
Copper-zinc Concentrates. 136-2-5/22

optimal compositions of matte (45% Cu) and slag as well as the degree of de-sulphurisation. Deep roasting is one of the main requirements, even when roasting and smelting are carried out in one unit. With deep roasts 80% of the zinc goes from the solid charge into the slag, 8.9% into the matte and 8-12% into the gas. With a 45-50% Cu matte the copper content of dumped slags was 0.7%; extraction of copper into the matte depends on the copper content of the concentrate and can be 90-93% with return of dust to the smelter, and up to 96-97% with treatment of the zinc slag. Extraction of noble metals was about the same as with raw or lightly-caloried charge. Average dust production is 4.5% of the charge weight and there can be up to 20-24% zinc in it (depending on the zinc content of the charge). Optimal sulphur content of the roast is 9-10% (2.0 - 2.5% sulphate sulphur); de-sulphurisation during smelting is 48-56%. Good separation of smelting products was always obtained, but observations on the state of the hearth suggest desirable design changes. Besides tabulation of materials analysis and metals balance graphs of zinc distribution vs matte copper content, of copper content in matte and slag vs time and of product temperatures vs time are given.

SOV/137-58-7-16169

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 321 (USSR)

AUTHORS: Aglitskiy, V. A., Yudytskiy, A. P., Fedotova, Ye. I.

TITLE: On the Method of Noble-metals Assay of Blister Copper (O metodike oprobovaniya chernovoy medi na sodержaniye blagorodnykh metallov)

PERIODICAL: Tr. i materialy. Ural'skiy n. -i. i proyekt. in-t medn. prom-sti, 1957, Nr 2, pp 355-360

ABSTRACT: The method of assaying (MA) blister Cu by means of sampling the liquid metal with a special mold-ladle without pouring the metal into a test mold. Several MA of crude CU for noble metal contents are given: Pattern drilling, taking of a liquid test sample from the converter or the ladle of the casting machine, and granulation of liquid metal. The comparative character of the results obtained with different MA is given. It is shown that in taking the test by means of drilling the solid metal, difficulties are encountered owing to the dirt present on the surface of the ingot, the uneven distribution of noble metals in the different sections of the ingot, and the different degrees of brittleness of the separate structural components of the ingot, resulting

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SOV/137-58-7-16169

On the Method of Noble-metals Assay of Blister Copper

in a different composition of the fine and the coarse fractions of the chips. The latter complicates the preparation of the test sample of chips for the analysis. It is determined that in the sampling of liquid crude Cu a great influence on the validity of the taking of the sample is exerted by the phenomena of liquation. The presence of liquation phenomena during the solidification of blister Cu has a telling effect on the noble-metal content in relation to the spot from which the sample was taken during the casting of Cu, whereas in the granulation of Cu its effect depends on whether the granulated metal is drawn directly from the stream of the metal tested or is granulated from the ladle.

1. Copper--Analysis    2. Copper (Liquid) Sampling    3. Copper  
--Test methods

A. M.

Card 2/2

SOV/81-59-10-37447

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 575 (USSR)

AUTHORS: Fedotova, Ye.I., Khvilivitskiy, R.Ya., Ovchinnikova, A.G.

TITLE: An Investigation of Benzylaminodiazobenzene as Initiator of Polymerization <sup>7</sup>

PERIODICAL: Uch. zap. Gor'kovsk. un-ta, 1958, Nr 32, pp 179-183

ABSTRACT: Crystalline benzylaminodiazobenzene (I) at 95 - 200°C and in a solution of ethylcellosolve at 50 - 115°C decomposes with evolution of N<sub>2</sub> (90 - 91.5 mol. % per one mole of decomposed I). At 80°C I initiates the polymerization of methylmethacrylate in the mass (concentration of I 0.01 - 0.33% of the monomer weight).

R. Milyutinskaya

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S/072/60/000/011/003/005  
B021/B058

AUTHORS: Berkman, A. S., Mel'nikova, I. G., Fedotova, Ye. I.

TITLE: Determination of the True Values of Open Porosity

PERIODICAL: Steklo i keramika, 1960, No. 11, pp. 27 - 29


TEXT: In this study, the authors used new methods of determining the pore volume: saturation of the sample with water after previous heating and the pressing of mercury into the pores of the sample, from which the air was removed. The samples were also saturated with liquids of various surface tension, at low temperature, boiling temperature, and under pressure with prior air removal. Samples of bricks prepared by the plastic and semidry process were used for the experiments, as well as mercury pore gages with low pressure (pores of from 800 to  $15\mu$  diameter) and high pressure (up to  $0.02\mu$ ). The values of the open porosity of some samples are listed in Tables 1 and 2. The scheme of the system serving for the saturation of porous materials by steam-heating is shown in a figure, the system devised by T. F. Trebin being mentioned. Special experiments were conducted in order to investigate the dependence of the

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Determination of the True Values of Open  
Porosity

S/072/60/000/011/003/005  
B021/B058

porosity values on the sample dimensions, the results of which can be seen in Table 3. In conclusion, it is stated that the value of open porosity, determined by known methods, is considerably lower than the true value. The method of pressing mercury into the pores of the sample at a minimum pressure of 2,000 atm produces maximum porosity values. There are 1 figure, 3 tables, and 3 Soviet references.



Card 2/2



FEDOTOVA, Ye.N.

Synthesis of aminocymene and its use as an antiknock agent in motor fuels. N. V. Ershov and E. N. Fedotova. *J. Applied Chem.* (U. S. S. R.) 10, No. 72 (in English 872) (1937).--p-MeC<sub>6</sub>H<sub>4</sub>(CHMe)<sub>2</sub>NH<sub>2</sub> was prepd. by nitrating p-MeC<sub>6</sub>H<sub>4</sub>CHMe<sub>2</sub> and reducing the nitro compd. to the amine. The o-nitro compd. was formed. A mixt. of p-MeC<sub>6</sub>H<sub>4</sub>CHMe<sub>2</sub>, 70 g. and glacial AcOH 11 cc. was treated with 70 g. H<sub>2</sub>SO<sub>4</sub> (d. 1.84), added in drops. The reaction mixt. was kept in an ice-NaCl bath and was thoroughly agitated. A nitration mixt. of HNO<sub>3</sub>, 50.4 g. (d. 1.38) and H<sub>2</sub>SO<sub>4</sub>, 116 g. (d. 1.84) was added, keeping the temp. below 0°. After all the nitration mixt. was added the reaction mixt. was agitated for 2 more hrs., poured into a water-ice mixt., and the nitro compd. was then extrd. with PhH. After the usual drying and purification, PhH was distd. off and the nitro compd. was fractionated. The fraction bp 148-162° was collected and reduced by means of Sn and HCl (d. 1.19). Aminocymene increased the octane no. of gasoline to the same extent as aniline. Eight references. A. A. Podgorny

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

FEDOTOVA, Ye.N.

5

Acceleration of the method of determining double bonds  
in synthetic resins by the use of a catalyst. T. N. Kaster-  
ina, Ye. N. Fedotova, and O. S. Shevchenko. *Zavodskaya*  
*Lab.* 21, 408-10 (1955).—Pyridine sulfate bromide was used  
for detg. residual double bonds in resins prepd. from allyl  
esters. Agreement within 0.2-0.5 units was generally ob-  
tained with theory. The reagent can be used also for detn.  
of furyl alc. The reagent is prepd. from pyridine, AcOH,  
and Br<sub>2</sub> and is used in CCl<sub>4</sub> soln. of the sample with soln. of  
2.5% Hg(OAc)<sub>2</sub> catalyst, followed by 15% KI soln. The  
iodine liberated after 1 min. is titrated with thiosulfate (cf.  
Benham, C.A. 44, 5110c). G. M. Kosolapoff

2 may

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5(2), (3) PHASE I BOOK EXPLOITATION 507/2554

Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Ekzempliya po khromatografi

Izvedeniya v oblasti ionoobmennoy, raspredelitel'noy i osadochnoy khromatografii (Studies in the Field of Ion Exchange, Distribution and Precipitation Chromatography) Moscow, Izdatvo AN SSSR, 1959. 150 p. Errata slip inserted. 3,500 copies printed.

Ed. of Publishing House: M.G. Yegorov; Tech. Ed.: I.M. Guseva; Editorial Board: I.V. Chumakov, Corresponding Member, USSR Academy of Sciences (Resp. Ed.); P.M. Shumyakin, Professor; L.M. Ol'shanova, Professor; K.M. Saldadze, Docent, and M.M. Tunitskiy, Professor.

FOREWORD: This book is intended for chemists and chemical engineers.

COVERPAGE: The book discusses studies in ion-exchange, distribution, and precipitation chromatography. Various problems of the theory of chromatography and its application are also considered. This is the 4th collection of articles published by the Committee on Chromatography, the first collection was published in 1952 under the title "Izvedeniya v oblasti khromatografii" (Studies in the Field of Chromatography). The second collection, published in 1955 under the title "Teoriya i praktika primeneniya khromatograficheskikh materialov" (Theory and Practice of the Use of Ion-exchange Materials); and the third was published in 1957 under the title "Izvedeniya v oblasti ionoobmennoy khromatografii" (Studies in the Field of Ion-exchange Chromatography). No personalities are mentioned. References are given after most of the articles.

Davidov, A.T. and G.M. Lisovina. Study of the Sorption Value and the Exchange Energy of Cations on Mefatite With Relation to Temperature

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Maghinakiy, I.Y. Theory of the Stationary Front of Dynamic Sorption

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Saldadze, K.M., and Ye. M. Yedintsev. Effect of the Ionite Structure on the Ion Exchange Process

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Sut-L., and P.M. Shumyakin. Purification of Salts With the Aid of an Ion-exchange Counterflow Installation

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Pedonevskiy, O.P., M.M. Tunitskiy, and Ye. P. Chernaya. Study of the Kinetics of Complete Cation Exchange on Sulfonated Resins

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Chernaya, Ye. P., A. B. Pashkov, S.R. Barabanov, and M.M. Tunitskiy. Change in the Selectivity of Strongly Acidic Monofunctional Cationites in Relation to the Concentration of Sulfo Groups and Interchain Bonds in Cationites

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Pedonevskiy, O.P., Ye. P. Chernaya, and M.M. Tunitskiy. Study of the Migration of Ions through a Cationite Membrane

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Shumyakin, P.M. Organic Reagents Used in Adsorption and Distribution Chromatography, Their Classification, and Trends of Investigation

80

Ritselorskiy, K.N., and Z.M. Shumyakin. Some New Phenomena Which Accompany the Process of Electromigration of Organic Substances

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Polynskiy, M.G. Study of Thermal Desulfonation of Sulfonated Phenolformaldehyde Resin M-1

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Koplova, V.D., and K.M. Ol'shanova. Precipitation Chromatography

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Koplova, V.D., and K.M. Ol'shanova. Secondary Phenomena in Precipitation Chromatography

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Ol'shanova, K.M., and K.M. Moresova. Determination of Calcium by the Precipitation Chromatography Method With the Indicator Murexide

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Ol'shanova, K.M., and Z.M. Shumyakin. Ion-exchange Paper Chromatography in Qualitative Analysis

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Golom'izova, M.Y. Chromatographic Method of Qualitative Analysis for Pur Dyestuffs

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Saldadze, K.M., K.M. Ol'shanova, and I.I. Ivanova. Sorption of Mineral Acids and of Their Salts on Cationites

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Dorobachyova, M.A., and K.M. Saldadze. Absorption of Complex Zinc Anions on Anionites With Different Basicity

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S/191/62/000/003/008/010  
B101/B147

AUTHORS: Saldadze, K. M., Peremyslova, Ye. S., Fedotova, Ye. N.,  
Goryunova, L. D.

TITLE: Methods of purifying commercial ionites

PERIODICAL: Plastikheskiye massy, no 3, 1962, 51-54

TEXT: The authors developed several methods of removing Fe and low-molecular organic substances from KY-2 (KU-2) cationite, and AB-17 (AV-17) (containing 16% divinylbenzene) and AN-18 (AN-18) anionites. Mixing the purifying liquid and ionite in a separating funnel proved to be less economical than filtering the purifying liquid upwards through the ionite (10 ml/min). The best method for KU-2 was: swelling in a saturated NaCl solution (0.5 l per 100 g KU-2), washing with 1 l H<sub>2</sub>O, treatment with 2% NaOH (3.6 l, 6.0 hrs), washing (1.8 l H<sub>2</sub>O, 3.0 hrs), treatment with 5% HCl (5.4 l, 9.0 hrs), washing (1.2 l H<sub>2</sub>O, 2.0 hrs). For 100 g AV-17: swelling in 0.5 l of saturated NaCl solution, washing with 1.0 l H<sub>2</sub>O, treatment with 5% HCl (13.8 l, 23.0 hrs), washing (4.2 l H<sub>2</sub>O, 7.0 hrs),

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